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Proceedings Series 2010/029 | **Compte rendu 2010/029**

Proceedings of the Centre for Science Advice, Pacific Region Review of a Science Advisory Report on Rationale for Index Site Selection for Olympia Oysters in British Columbia

April 15, 2010

Delta Ocean Point Resort
Victoria, BC

Ray Lauzier, Chairperson

Compte rendu de l'examen d'un avis scientifique sur la justification du choix de sites témoins pour l'huître plate du Pacifique en Colombie-Britannique par le Centre des avis scientifiques, Région du Pacifique

Le 15 avril 2010

Delta Ocean Point Resort
Victoria, C.-B.

Ray Lauzier, président de la réunion

Fisheries and Oceans Canada
Pacific Biological Station
Nanaimo, BC V9T 6N7

July 2010 | **Juillet 2010**

Canada

Foreword

The purpose of these Proceedings is to document the activities and key discussions of the meeting. The Proceedings include research recommendations, uncertainties, and the rationale for decisions made by the meeting. Proceedings also document when data, analyses or interpretations were reviewed and rejected on scientific grounds, including the reason(s) for rejection. As such, interpretations and opinions presented in this report individually may be factually incorrect or misleading, but are included to record as faithfully as possible what was considered at the meeting. No statements are to be taken as reflecting the conclusions of the meeting unless they are clearly identified as such. Moreover, further review may result in a change of conclusions where additional information was identified as relevant to the topics being considered, but not available in the timeframe of the meeting. In the rare case when there are formal dissenting views, these are also archived as Annexes to the Proceedings.

Avant-propos

Le présent compte rendu a pour but de documenter les principales activités et discussions qui ont eu lieu au cours de la réunion. Il contient des recommandations sur les recherches à effectuer, traite des incertitudes et expose les motifs ayant mené à la prise de décisions pendant la réunion. En outre, il fait état de données, d'analyses ou d'interprétations passées en revue et rejetées pour des raisons scientifiques, en donnant la raison du rejet. Bien que les interprétations et les opinions contenus dans le présent rapport puissent être inexacts ou propres à induire en erreur, ils sont quand même reproduits aussi fidèlement que possible afin de refléter les échanges tenus au cours de la réunion. Ainsi, aucune partie de ce rapport ne doit être considéré en tant que reflet des conclusions de la réunion, à moins d'indication précise en ce sens. De plus, un examen ultérieur de la question pourrait entraîner des changements aux conclusions, notamment si l'information supplémentaire pertinente, non disponible au moment de la réunion, est fournie par la suite. Finalement, dans les rares cas où des opinions divergentes sont exprimées officiellement, celles-ci sont également consignées dans les annexes du compte rendu.

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ISSN 1701-1272 (Printed / Imprimé)

Published and available free from:
Une publication gratuite de :

Fisheries and Oceans Canada / Pêches et Océans Canada
Canadian Science Advisory Secretariat / Secrétariat canadien de consultation scientifique
200, rue Kent Street
Ottawa, Ontario
K1A 0E6

http://www.dfo-mpo.gc.ca/csas/

CSAS@DFO-MPO.GC.CA

Printed on recycled paper.
Imprimé sur papier recyclé.

Correct citation for this publication:

DFO. 2010. Proceedings of the Centre for Science Advice, Pacific Region Review of a Science Advisory Report on Rationale for Index Site Selection for Olympia Oysters in British Columbia: April 15, 2010. DFO Can. Sci. Advis. Sec. Proceed. Ser. 2010/029.

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SUMMARY

Participants from Invertebrate Standing Committee for the Centre for Science Advice Pacific (CSAP) and external participants from the Provincial Government, non-governmental organizations (NGO) community, and invited biological consultants attended a Regional Advisory Process (RAP) meeting on April 15, 2010 to assess and develop advice for the following Science Advisory Report:

- Rationale for index site selection for Olympia Oysters (*Ostrea lurida* Carpenter, 1864) in British Columbia

Comments received on the Science Advisory Report are presented in these Proceedings. The paper was accepted subject to revisions. Products of the meeting will be a CSAS Science Advisory Report (SAR).

SOMMAIRE

Des membres du comité permanent sur les invertébrés du Centre des avis scientifiques, Région du Pacifique, des représentants du gouvernement provincial et de la communauté des organisations non gouvernementales (ONG) ainsi que des experts-conseils en biologie invités ont pris part à une réunion de consultation scientifique régionale le 15 avril 2010 afin d'évaluer l'avis scientifique suivant et de formuler un avis à cet égard :

- Justification du choix de sites témoins pour l'huître plate du Pacifique (*Ostrea lurida,* Carpenter, 1864) en Colombie-Britannique

Les commentaires formulés sur ce document sont consignés dans le présent compte rendu. Le document a été accepté, moyennant l'apport de corrections. Le produit de la réunion sera un avis scientifique (AS) du SCCS.

INTRODUCTION

The Centre for Science Advice Pacific met April 15, 2010 at the Delta Ocean Pointe Resort in Victoria, British Columbia. The Subcommittee Chair, R. Lauzier, opened the meeting by welcoming the participants, reviewed the agenda and referred to the terms of reference. During the introductory remarks the objectives of the meeting were reviewed, and the participants accepted the meeting agenda.

The Subcommittee reviewed one Science Advisory Report on rationale for index site selection for Olympia oysters. The meeting agenda appears as Appendix 1, the terms of reference is Appendix 2 and the list of attendees is Appendix 3.

DETAILED COMMENTS FROM THE REVIEWS

Rationale for index site selection for Olympia Oysters (*Ostrea lurida* Carpenter, 1864) in British Columbia

**Science Advisory Report accepted with revisions*

General Discussion

It was recognized that the overall purpose of Olympia oyster monitoring was to assist COSEWIC in making decisions on uplisting or downlisting the species in the next five years, which is the Management Plan period.

There was subcommittee discussion on whether DFO should be collecting data for Olympia oysters, or should DFO be only analyzing the data collected by others, considering that Olympia oysters is a species of special concern. This led to discussions on the larger issues of how species at risk are monitored, and the involvement/interaction of community groups, third parties and DFO staff.

Two questions in particular framed the subsequent discussion: (1) Are the sites appropriate for monitoring the biological status?; and (2) Are the sites appropriate or suitable for third party monitoring?

The subcommittee recognized that some sites were specifically selected for collaboration reasons, such as the Port Eliza site for collaboration with the Puget Sound Restoration Group. In the randomly selected sites, it was recognized that there needs to be sufficient densities to allow monitoring over time, but there is also the need to describe the exclusions, such as not feasible to survey (dangerous conditions) or extremely cryptic populations (oysters are under rocks).

The subcommittee agreed that more detail is required on the selection process of non-random sites. It was suggested that each site be described in a short paragraph to include the criteria used for selection, such as observed densities (high, medium or low); activities around the beaches; and opportunities for third party monitoring such as the Puget Sound Restoration Group. When asked the question on the number of actual assessment sites, the authors replied that consideration was given to the overall number

of assessment sites, however the northern limit of distribution of Olympia oysters is the Central Coast, and many sites are unsurveyable and inaccessible, therefore information derived from many of the sites would be distributional information only.

Conclusions

The subcommittee requested that the background section on existing approaches for selecting index sites for assessment programs, including invertebrates, finfish and soil quality, should be condensed to more general concepts rather than specific details. The subcommittee also agreed that the section on non-random site selection needed to be expanded to describe the process and rationale, as well as outline the diversity of criteria used in the selection process.

Recommendations

1. The subcommittee recommends accepting the outlined site selection methodology of a combination of opportunistic sampling at existing sites and at sites randomly selected specifically for Olympia oysters with an explanation of the rationale/objective of each method:

    a. The subcommittee recommends using opportunistic sampling by third parties and/or dovetailing of other invertebrate surveys in areas of existing Olympia oyster populations to monitor their biological status.

    b. The subcommittee recommends the random selection of sites using different criteria, depending on the initial observed density, that adequately describes the biological status of the species.

2. The subcommittee endorses the proposed index sites identified in the Science Advisory Report to monitor the biological status of Olympia oysters.

Appendix 1. Agenda

Rationale for index site selection for Olympia Oysters (*Ostrea Lurida* Carpenter, 1864) in British Columbia

15 April 2010
1.00 – 4.30 pm
Delta Ocean Pointe Resort
Victoria BC

1 pm: Instructions/Comments of the Chair (Ray Lauzier)

1:10 pm: Presentation of Science Advisory Report: Rationale for index site selection for Olympia Oysters (Ostrea lurida Carpenter, 1864) in British Columbia

1:50: Comments of Reviewer 1 and Discussion
2:50: Refreshment break
3:10: Comments of Reviewer 2 and Discussion
4:10: Open discussion
4:20: Closing comments/next steps: Chair

Appendix 2. List of Attendees

Last Name	First Name
Boutillier	Jim
Clark	Dan
Duprey	Nicholas
Gillespie	Graham
Hand	Claudia
Joyce	Marilyn
Lauzier	Ray
MacConnachie	Sean
Norgard	Tammy
Rogers	Juanita
Rutherford	Dennis
Watson	Nicolette

Appendix 3. Terms of Reference

Terms of Reference

Extraordinary Regional Advisory Meeting

Rationale for index site selection for monitoring Olympia Oyster (*Ostrea lurida* Carpenter, 1864) population in British Columbia

Pacific Scientific Advice Review Committee (PSARC)
15 April, 2010
Delta Ocean Pointe Resort,
Victoria, B.C.

Chairperson: Ray Lauzier

Context

The PSARC Invertebrate Subcommittee meets routinely to conduct peer reviews of scientific information in support of management decision making. A peer review of a Science Advisory Report on the rationale for index site selection for monitoring Olympia Oyster (*Ostrea lurida* Carpenter, 1864) population in British Columbia is planned for 15 April, 2010. Olympia oysters were listed under the *Species at Risk Act* (SARA) as species of special concern in 2003. A management plan was subsequently published by Fisheries and Oceans Canada (DFO) in 2009. The objective of the management plan is to ensure maintenance of the relative abundance of Olympia oysters at index sites over the next six years (2008-2013). One of the identified management actions to reach this objective is to review relative abundance levels at index sites at least once every five years, given their sessile nature and generation time. This Science Advisory Report reviews the methodology used to establish index sites for Olympia oyster monitoring.

Objectives

Rationale for index site selection for monitoring Olympia Oyster (*Ostrea lurida* Carpenter, 1864) population in British Columbia

This paper reviews the applicability of index sites as a proxy for measuring population dynamics used in a wide variety of assessment programs at DFO and other jurisdictions. The most commonly used criteria for index site selection has been either to choose sites where the species being assessed was previously known to occur or to select sites that are convenient and accessible. While these approaches may introduce bias in sampling and may not accurately reflect actual status of the population, those sites that are chosen because of pre-existing conditions may already have data that can be added to

future studies. Choosing sites that are accessible and convenient also greatly increases the probability of the survey continuing in the future. Based on the results of distributional surveys of 2009, a mix of opportunistic sites as well as randomly selected sites are identified as index sites to provide a representative sample of Olympia oyster populations in four different geographic zones.

Products

- CSAS Proceedings document summarizing the discussion (1)
- CSAS Science Advisory Report (1)

Location and Date

Delta Ocean Pointe Resort, 35 Songhees Rd, Victoria, B.C. April 15 1PM

Participants

Participants will include internal DFO representatives and potentially participants from the Province of British Columbia, academia, First Nations, and NGO's.